## PORT OF HOUSTON AUTHORITY

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Via Certified Mail 7010 3090 0003 4120 8875

September 29, 2011

Mr. Gary Miller, P.E. Remediation Project Manager 1445 Ross Avenue, Suite 1200 Mail Code: 6SF-RA Dallas, TX 75202-2733

Re: Comments on "Draft Addendum 1 to the Sediment Sampling and Analysis Plan (SAP) for additional upstream sediment sampling, San Jacinto River Waste Pits Superfund Site" and "Draft Addendum 1 to the Tissue Sampling and Analysis Plan (SAP) for additional background catfish and crab tissue sampling, San Jacinto River Waste Pits Superfund Site"

Dear Mr. Miller:

Enclosed are the Port of Houston Authority's comments on "Draft Addendum 1 to the Sediment Sampling and Analysis Plan (SAP) for additional upstream sediment sampling, San Jacinto River Waste Pits Superfund Site" and "Draft Addendum 1 to the Tissue Sampling and Analysis Plan (SAP) for additional background catfish and crab tissue sampling, San Jacinto River Waste Pits Superfund Site." We would appreciate your review and consideration of these comments. If you have any questions, please contact me at 713-670-2663.

Very truly yours,

Linda Henry

Enclosure

cc: Nicole Hausler (PHA)
Garry McMahan (PHA)

Lunda Henry



September 29, 2011

Comments on "Draft Addendum 1 to the Sediment Sampling and Analysis Plan (SAP) for additional upstream sediment sampling, San Jacinto River Waste Pits Superfund Site" and "Draft Addendum 1 to the Tissue Sampling and Analysis Plan (SAP) for additional background catfish and crab tissue sampling, San Jacinto River Waste Pits Superfund Site"

On behalf of the Port of Houston Authority (PHA), HDR has reviewed the aforementioned memoranda and submits the following comments.

Comments on the "Draft Addendum 1 to the Sediment Sampling and Analysis Plan (SAP) for additional upstream sediment sampling, San Jacinto River Waste Pits Superfund Site"

The Statement of the Problem asserts that the existing upstream sediment dataset does not reflect the appropriate range of percent fines and percent carbon to characterize the full range of dioxin and furan concentrations in the background environment and that the existing background data set may be biased low. The Introduction of Attachment A states "All new data would be added to the existing data set, and none of the existing data would be discarded or replaced." The new data should be used in stratified data interpretations as appropriate to the percent fines and TOC content of the samples. It is not appropriate to use the new data with a higher percentage of fines and/or TOC to characterize background contaminant concentrations for areas on the Site with lower fines or TOC conditions.

The Analytical Approach discusses collecting at least 20 samples, of which 10 will be analyzed for dioxins, furans, and percent organic carbon. Since the contaminant concentrations are known to depend, in part, on percent fines and TOC content, both percent fines and TOC as well as furans/dioxins analyses are useful. The memorandum cites Figure 1 (Upstream Sediment Sampling Area) and states that sites would be selected in the field. It is understood that some changes may need to be made in the field and agree with the proposed USEPA consultation. However, a grid, other uniform pattern, or objective method should be used to define the sampling or at least designate proposed sampling areas more specifically. Given the importance of this sampling event, additional information on where the proposed samples would be taken is needed to minimize possible bias in analyses of background conditions by including areas that may have been impacted by the Site. Fine grained sediments remain suspended longer than coarse grains, and thus are expected to impact areas farther from the Site. Because this sampling effort will focus on collecting such fine grained sediments, the locations should be further from the Site than would coarse-grained samples. The proposed sampling depths are appropriate. Additional information is also needed regarding how the subset of 10 samples will be selected from the 20 samples anticipated to be taken. The methodology for the selection of the samples to be analyzed has not been presented.

The parties have claimed that the relative distribution of congeners onsite versus areas further from the Site can be used to distinguish dioxins from the Site from other sources in the area. If those or other "fingerprint" interpretations are planned, the additional sammples to be collected should be analyzed to support use of such fingerprinting.

Comments on the "Draft Addendum 1 to the Sediment Sampling and Analysis Plan (SAP) for additional background catfish and crab tissue sampling, San Jacinto River Waste Pits Superfund Site"

The Statement of the Problem asserts that the existing data from previous tissue sampling lacks the information to characterize the true background condition for catfish and blue crab tissues. In the Sampling Objective, the memorandum states that catfish and crabs are highly mobile but does not provide specific information to support the statement. While these species are mobile, the statement seems to indicate the possibility that the previously collected individuals may have moved across the entire ecosystem. The statement that the catfish and blue crabs may have derived tissue burdens from elsewhere in the San Jacinto-Galveston Bay ecosystem is hypothetical and not supported by data.

The memorandum cites Figure 1 (Upstream Background Fish Collection Area for Hardhead Catfish and Blue Crab) and Figure 2 (Additional Background Fish Collection Area for Hardhead Catfish and Blue Crab) and states that sites would be selected in the field. It is understood that some changes may need to be made in the field and agree with the proposed USEPA consultation. However, a grid, other uniform pattern or objective method should be used to define the sampling or at least designate proposed collection areas more specifically. Given the importance of this collection event, additional information on where the proposed collections would be taken is needed. Additionally, it is unclear what methods will be used to collect the catfish and blue crabs (e.g., collection equipment, depths, etc.). For example, using only a seine to collect catfish and blue crabs could lead to the collection of younger and smaller individuals that may not be representative of the population. This could lead to skewed results as it relates to bioaccumulation of dioxins and furans in the tissue. The catch should be analyzed and limited to exclude juvenile catfish and blue crabs, as these individuals would be too small for standard human consumption.

## **Conclusions**

The sampling plans for sediment and tissue samples should more specifically propose areas for sampling. The fines content (as well as TOC) of sediment samples must be analyzed to interpret the contaminant concentration data. If fingerprint interpretations are planned for any of the data set, the appropriate analyses should be included for these supplemental samples as well. Tissue samples should include descriptions of the sizes of individuals and should be limited to those organisms large enough to represent potential human health ingestion, since the data may be used in the human health risk assessment.

Any questions regarding HDR's comments on behalf of the PHA should be directed to Linda Henry at (713) 670-2663.

Sincerely,

Thomas E. Pease, PE, PhD

**Senior Professional Associate** 

cc: Kerri Snyder, AICP, Project Manager